



National Weather Service

Storm Data and Unusual Weather Phenomena



August 2001

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
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WISCONSIN, Southeast

and Sauk Counties. The worst flash flooding occurred in the Black Earth Creek drainage basin of northwest Dane County, especially in the cities of Black Earth and Mazomanie, where at least 10,000 sand-bags were used. Flash flooding also occurred in scattered locations between the village of Roxbury and Middleton. Many roads had gravel shoulder washouts were noted, and numerous homes sustained water damage after water levels reached 2 to 4 feet in depth. Many roads were blocked by fast-flowing water up to 2 to 3 feet deep in spots. The heavy rains damaged the ceiling and light fixtures in Madison Middle School. Also in Madison, a building, containing four radio stations, suffered flood damage to it's contents after water reached a depth of 2.5 feet on the lowest floor. Radio broadcasts were interrupted for a couple hours. Several UW-Madison campus buildings and several other Madison school buildings had water reported in their basements. In DeForest, a construction site was damaged due to a mudslide onto an adjacent road. A 3-mile stretch of a trail between Verona and Fitchburg suffered washout damage. Northwest of Mt. Horeb, a man was saved by a farm couple, after he lost control of his vehicle on a water-covered road near Bohn Creek, and flipped over into the creek. Much tree litter was noted on roads and lawns in and around the city of Madison. Twenty-four hour rainfall amounts in Dane County, ending around 0700CST on August 2nd, ranged from around 3 inches in the eastern part to 9 to over 11 inches in Black Earth. It is unknown how much more than 11 inches fell in Black Earth, since that rain gage over-flowed! In the first round of heavy rains, Mazomanie recorded 2 inches within 20 minutes! Other 24-hour totals in Dane County include 8.7 inches in Mazomanie, 7.89 inches near Waunakee, 7.53 inches west of Middleton, 5.47 inches in McFarland, 5.35 inches in Blue Mounds, and 4 to 6 inches across the city of Madison. For the calendar day of August 2nd, Madison's Truax Field set a new daily rainfall record of 3.40 inches, breaking the old record of .71 inches set back in 1963.

Sauk County Countywide

**02 0430CST
0700CST 0 0 150K Flash Flood**

Two rounds of thunderstorms with very heavy rains pounded south-central Wisconsin, the first one during the evening hours of August 1st, and the second round during the pre-dawn hours of August 2nd, resulting in flooding or flash flooding in Dane, Iowa, and Sauk Counties. Flash flooding occurred in scattered locations across Sauk County, but the worst was between Baraboo and Devil's Lake State Park. A road in Baraboo washed out, allowing a semi-trailer tractor to sink into the mud. Washouts of camp sites occurred in the State Park area, and many other roads across the county had gravel shoulder washouts. In Sauk County, Reedsburg measured 6.07 inches, and 5.96 inches fell in Prairie du Sac.

WIZ056-058>060-062- 064>072

Sauk - Dodge - Washington - Ozaukee - Iowa - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

**03 0000CST
0800CST 0 0 Fog**

Dense fog developed overnight and reduced visibilities to zero to 1/4 mile. At least a couple dozen vehicle accidents were noted in newspapers, and many airplane flights were delayed or cancelled. The dense fog was the result of clear skies, a light northeast wind, and evaporation of moisture from rains on August 2nd.

WIZ046>047-051>052- 056>060-062>072

Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Ozaukee - Iowa - Dane - Jefferson - Waukesha - Milwaukee - Lafayette - Green - Rock - Walworth - Racine - Kenosha

**06 1100CST
09 2200CST 4 0 Excessive Heat**

This excessive heat episode was the third, and longest, of the 2001 summer in south-central and southeast Wisconsin. Daytime heat indices reached 105 to 110, and stayed above 80 at night. Maximum air temperatures were in the lower to mid 90s, while dewpoints were in the mid 70s. Milwaukee Mitchell Field (Milwaukee Co.) had maximum air temperatures of 92, 94, 95, and 95, for the 6th, 7th, 8th, and 9th of August, while Madison had 90, 93, 90, and 91, respectively. The 95's in Milwaukee were the highest readings for the summer of 2001. On the 9th, the city of Waukesha (Waukesha Co.) had 97, while Kenosha (Kenosha Co.) came in with 96. Two fatalities were reported in Milwaukee County - a male, age 67, and a female, age 75. Both were found indoors. The Kenosha County medical examiner reported two heat-related fatalities - a male, age 56 (indoors), and a female, age 8 (outdoors), who also suffered from asthma. Newspaper accounts indicated that dozens of people were treated at hospitals across south-central and southeast Wisconsin for heat-related illnesses (not true "injuries"). For example, a golfer (male, age 46) in Kenosha County, who collapsed and was taken to a hospital in critical condition, ultimately survived. Their body temperature had reached 108 degrees! Attendance was sharply down at various county fairs, at the State Fair in West Allis (Milwaukee Co.), at beaches along the Lake Michigan shoreline, and at local municipal pools. In addition, several senior citizen events were cancelled due to the heat. Most commercial outlets reported that their supply of air conditioners were sold out. Milwaukee area hospitals reported about a dozen cases of severe asthma on average each day during this heat wave, about twice the normal number per day during summer. Ozone levels reached dangerous values, prompting the state DNR to issue Ozone Action Days for southeastern Wisconsin. Electrical companies reported near-record or record daily electrical usage. M67PH, F75PH, M56PH, F80U



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WISCONSIN, Southeast

Sheboygan County									
2 S Waldo	09	1605CST			0	0			Thunderstorm Wind (G52)
Dane County									
Madison	09	1625CST 1630CST			0	0			Thunderstorm Wind (G56)
Rock County									
Orfordville	09	1630CST			0	0	25K		Thunderstorm Wind (G52)
Washington County									
1 NW Hartford	09	1630CST 1815CST			0	0			Thunderstorm Wind (G52)
Waukesha County									
Waukesha	09	1640CST			0	0			Thunderstorm Wind (G52)
Milwaukee County									
West Allis to Milwaukee	09	1650CST 1715CST			0	1	75K		Thunderstorm Wind (G52)
Milwaukee County									
Milwaukee	09	1700CST 1830CST			0	0			Urban/Sml Stream Fld
Walworth County									
Richmond	09	1728CST			0	0			Thunderstorm Wind (G52)
Walworth County									
3 E Spring Prairie	09	1755CST			0	0			Thunderstorm Wind (G52)
Racine County									
Burlington to Racine	09	1800CST 1810CST			0	0			Thunderstorm Wind (G52)
Kenosha County									
Kenosha	09	1815CST			0	0	25K		Thunderstorm Wind (G52)

Scattered clusters of thunderstorms, some severe, moved east-southeast through south-central and southeast Wisconsin during the late afternoon and early evening hours. They eventually merged into a line of storms as they moved into Racine and Kenosha Counties. Damaging straight-line winds, gusting to an estimated 50 to 56 knots (58 to 65 mph), toppled large trees and/or power lines and poles near Waldo (Sheboygan Co.), east of Spring Prairie (Walworth Co.), near Richmond (Walworth Co.), in the Burlington to Racine area (Racine Co.), around the city of Kenosha (Kenosha Co.), just northwest of Hartford (Washington Co.), from West Allis into Milwaukee (Milwaukee Co.), from the UW-Madison campus to the Capital Square in Madison (Dane Co.), in the city of Waukesha (Waukesha Co.), and in/near Orfordville (Rock Co.). One person was injured at the State Fair Park in West Allis when the powerful thunderstorm winds blew a fence onto that person's head. Two homes and several vehicles in the city of Milwaukee sustained tree damage. In Orfordville, two buildings were damaged by toppled trees. Utility companies reported that nearly 40,000 customers lost electrical power as the storms passed through, 19,000 of them in Milwaukee County alone. Very heavy rains of 1 to 2 inches accompanied the storms, resulting in urban flooding in the city of Milwaukee. Manhole covers popped in the city and there were reports of 6 inches of water covering some of the city's streets.

Sheboygan County									
Elkhart Lake to Cedar Grove	12	1910CST 1930CST			0	0	25K		Thunderstorm Wind (G56)
Sheboygan County									
Sheboygan	12	1920CST 2030CST			0	0			Urban/Sml Stream Fld

A short line of severe thunderstorms rolled southeast through the county of Sheboygan. Accompanying powerful downburst winds, estimated to be 50 to 56 knots (58 to 65 mph), toppled large trees across most of the county, especially in the area from Elkhart Lake to Cedar Grove. Some power lines sustained tree damage, mainly in the Plymouth area, and also in the city of Sheboygan. Brief



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WISCONSIN, Southeast

heavy rains of 1 to 1.5 inches resulted in minor urban flooding in the city of Sheboygan, where 4 inch water depths on some roads were reported, and water got into some buildings.

Green Lake County

Kingston to Markesan	18	1500CST 1700CST			0	0			Urban/Sml Stream Fld
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Rock County

Milton	18	1630CST 1800CST			0	0			Urban/Sml Stream Fld
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Dodge County

3 ESE Beaver Dam	18	1655CST			0	0			Hail (1.00)
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Slow moving thunderstorms dumped heavy rains of 1.5 to 2.5 inches within two hours, resulting in scattered urban and small stream flooding. Ponding of water on roads was reported across southern Green Lake County, as well as around Milton (Rock Co.). Isolated large hail also accompanied the storms. There were several reports of non-damaging hail up to 1/2 inch in diameter in Milton, Beaver Dam (Dodge Co.), and southeast Marquette County. Synoptically, an upper-level low pressure moved southeast from Minneapolis to Dubuque to Chicago, putting southern Wisconsin on the north side where -15 C temperatures were found at 500 mb. Surface air temperatures were in the mid to upper 70s and surface dewpoints were in the lower 60s.

Fond Du Lac County

Waupun	22	0255CST			0	0	20K		Lightning
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Fond Du Lac County

Waupun	22	0255CST			0	0			Thunderstorm Wind (G52)
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Washington County

West Bend	22	0328CST			0	0			Thunderstorm Wind (G52)
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Washington County

West Bend	22	0335CST			0	0	17K		Lightning
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Dodge County

Farmersville	22	0345CST			0	0	75K		Lightning
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Dodge County

Juneau to Mayville	22	0345CST 0400CST			0	0			Thunderstorm Wind (G52)
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Dodge County

Juneau	22	0345CST 0600CST			0	0			Urban/Sml Stream Fld
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Ozaukee County

Port Washington	22	0350CST			0	0	15K		Lightning
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Washington County

West Bend	22	0400CST 0600CST			0	0			Urban/Sml Stream Fld
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Scattered, early morning severe thunderstorms, packing damaging downburst winds, and many lightning strikes, moved through southeast Wisconsin. Estimated winds gusts around 52 knots (60 mph) toppled large trees or broke off many large tree limbs in the Waupun area (Fond du Lac), the central part of Dodge County from Juneau to Mayville, and in the West Bend area (Washington Co.). Lightning strikes damaged 5 power stations in the Waupun area, and started a fire that completely burned a barn near Farmersville (Dodge Co.). Brief, heavy rains accompanied the storms, resulting in urban/small stream flooding in and around Juneau (Dodge Co.). The Emergency Management of Dodge County reported 2.50 inches of rain at Juneau with many area roads under 1/2 to 1 foot of water. Visibility during the heavy rains was as low as 50 yards. In addition, small hail (1/4 inch in diameter) was reported around Juneau, as well as in Milwaukee County. Several lightning strikes around West Bend (Washington Co.) and Port Washington (Ozaukee Co.), knocked out power lines and/or transformers, resulting in 2000 customers in those cities losing electrical power. One lightning bolt struck a West Bend home, starting a self-extinguishing fire that left about \$1200 in damage. In addition, 2.5 to 3.0 inches of rain fell in the West Bend area during the pre-dawn hours, leading to urban flooding in that city. West Bend residents said the streets looked like "waterfalls."



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					Killed	Injured	Property	Crops	

WISCONSIN, Southeast

Milwaukee County

Milwaukee	22	1230CST 1400CST			0	0			Urban/Sml Stream Fld
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Thunderstorms dumped around an inch of rain in 30 minutes, resulting in urban flooding in the city of Milwaukee. Law enforcement officials reported that water depths reached 2 feet on Interstate 94 westbound at 26th Street. No damage was noted, but interstate traffic was backed up for a couple hours.

WIZ062-067>069

Iowa - Lafayette - Green - Rock

22	2100CST			0	0			Fog
23	0800CST							

Very dense fog developed overnight, reducing visibilities to between zero and 1/4 mile. Several vehicle accidents were noted. The dense fog was the result of evaporation of rain which fell on August 22nd, weak north-northeast surface winds, and partly cloudy skies.

WIZ046>047-051>052- 056>059-063>065-070

Marquette - Green Lake - Fond Du Lac - Sheboygan - Sauk - Columbia - Dodge - Washington - Dane - Jefferson - Waukesha - Walworth

22	2200CST			0	0			Fog
23	0800CST							

Very dense fog developed overnight, reducing visibilities to between zero and 1/4 mile. Several vehicle accidents were noted. One in northwest Jefferson County resulted in 1 death and 3 injuries (all indirectly-related). An accident on Interstate 90/94 near Highway 19 involving three semi-tractor trailers resulted in 2 injuries (indirectly-related). Another accident just northeast of Madison involved a car and train. The driver of the car was killed (indirectly-related to fog). Many airplane flights were delayed. The dense fog was the result of evaporation of rain which fell on August 22nd, weak north-northeast surface winds, and partly cloudy skies.

WIZ060-066-071>072

Ozaukee - Milwaukee - Racine - Kenosha

23	0100CST 0800CST			0	0			Fog
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Very dense fog developed overnight, reducing visibilities to between zero and 1/4 mile. Several vehicle accidents were noted, and many airplane flights were delayed. The dense fog was the result of evaporation of rain which fell on August 22nd, weak north-northeast surface winds, and partly cloudy skies.

Kenosha County

3.5 NE Paris to 3.7 NE Paris	25	1640CST 1641CST	0.2	30	0	0	10K		Tornado (F0)
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A weak tornado spun up in north-central Kenosha County, about 3.5 miles northeast of Paris. It pushed over an old shed, a TV antenna, and uprooted several trees on a property located on the south side of County Hwy KR. Based on damage, wind speeds were probably in the 70 to 78 knot range (80 to 90 mph). This tornado exited Kenosha County about 3.7 miles northeast of Paris, or .8 miles east of the intersection of KR and D, and entered Racine County about 2.8 miles east-southeast of Union Grove. It proceeded northeast toward the intersection of Interstate 94 and Highway 11, and eventually dissipated 1.8 miles northwest of Sturtevant. Synoptically, a 500 mb circulation center moved northeast through southeast Wisconsin at the time of the tornado. Scattered thunderstorms associated with the low moved northeast at about 30 mph. Maximum air temperatures during the afternoon were in the lower 80s with surface dewpoints in the mid to upper 60s.

Racine County

2.8 ESE Union Grove to 1.8 NW Sturtevant	25	1641CST 1650CST	4.3	50	0	0	25K	10K	Tornado (F1)
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This weak tornado spun up in north-central Kenosha County, about 3.5 miles northeast of Paris. It exited Kenosha County about 3.7 miles northeast of Paris, or .8 miles east of the intersection of KR and D, and entered Racine County about 2.8 miles east-southeast of Union Grove. It proceeded northeast toward the intersection of Interstate 94 and Highway 11, and eventually dissipated 1.8 miles northwest of Sturtevant. Luckily, the tornado circulation wasn't at ground level the entire time, and traveled part of the time over some swamp land, otherwise there would have been more damage. In Racine County, the tornado intensified to the top of the F1 rating (winds about 87 to 96 knots, or 100 to 110 mph), and demolished a hay shed, damaged a pole barn (horse trailer inside was



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WISCONSIN, Southeast

pushed through a closed door), flattened some fence, uprooted or snapped many trees, damaged a road sign, damaged a Sheriff Department speed trailer at the I-94/Hwy 11 intersection, and flattened some corn crop. A couple of power line poles were also damaged. Eyewitness reports indicated that the tornado briefly consisted of multiple vortices, and sounded like a jet engine. Average path length was about 25 yards. Synoptically, a 500 mb circulation center moved northeast through southeast Wisconsin at the time of the tornado. Scattered thunderstorms associated with the low moved northeast at about 30 mph. Maximum air temperatures during the afternoon were in the lower 80s with surface dewpoints in the mid to upper 60s.